

NPOL Radar Science Log
CAMEX/KAMP Experiment
Naval Air Station, Boca Chica Key, Florida
August – September, 2001

Note: 1200 UTC = 0800 Local Time

1800 UTC = 1400 Local Time

0000 UTC = 2000 Local Time

0600 UTC = 0200 Local Time

8/18/01

1600UTC	Few scattered clouds, mostly clear Winds: S, SE
1700UTC	Line of clouds building across northern half of sky. This line is not very deep. Southern sky is mostly clear with a few clouds building far off due south of here. Winds: SE
1800 UTC	Line of clouds becoming more continuous to the north, but still not very deep. The clouds to the northwest appear to be growing. The radar is showing some non-meteorological features moving toward the north. The real weather is generally moving toward the NW. Winds: SE
1900 UTC	Line to the north breaking up, but cell to the NW still apparent. Winds: SE
2016 UTC	ER-2 DC-8 fly over cell to the west.
2100 UTC	Everything to the north has basically disappeared. Otherwise clear with small puff clouds all around us. Winds: SE

8/19/01

1500 UTC	Small low clouds all around and above site. Humid. Winds: light, SE
1600 UTC	Mostly clear, small clouds all around. The N half of the sky has larger number of clouds than southern half. Winds: stronger, SE
1700 UTC	Clear directly overhead. One cell to the south is gaining some height, as are a couple cells to the north and northwest. Winds: light SE
1800 UTC	Small cell to the north, otherwise only small clouds all around. Winds: light SE
2000 UTC	A few small to medium sized clouds to the north, otherwise the sky is clear with only a few high feathery clouds overhead. Winds: SE
2100 UTC	Same conditions, nothing on radar of any value to us.
2200 UTC	Line of clouds that had been to the north of us has moved much closer, but still is just barely north of us. The rest of the sky is clear. Nothing on radar. Winds: light, SE

8/20/01

1100 UTC	Thin high cirrus covers most of sky.
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	Winds: calm
1200 UTC	Western sky is mostly clear, eastern sky still is mostly occupied by thin high cirrus.
	Winds: calm
1300 UTC	Cirrus clouds are still covering the eastern half of the sky, but there are fewer of them than before. Winds have picked up a little.
	Winds: light, SSE
1400 UTC	Sky is basically clear. Cirrus clouds have diminished for the most part, but still a few left overhead and to the east. Small cumulus clouds are forming, especially to the north.
	Winds: light, SSE
1500 UTC	Sky is clear to the south. To the north, more cumulus clouds are forming and growing larger. A few small cells are located in the NW quadrant on radar.
	Winds: light, E
1600 UTC	Conditions are pretty much the same as they were at 1500.
	Winds: light, E
1700 UTC	High clouds have moved in from the south and cover the southern 2/3 of the sky. A couple cumulus clouds have reached medium height to the NE. Their tops are sharp, so maybe they will continue to grow. In the far distance to NW the cumulus clouds also are gaining depth.
	Winds: light, ESE
1800 UTC	High clouds remain over the southern 2/3 of the sky. The largest cell out there now is fairly close to us to the NE. It's hard to tell because of the trees, but it appears that it may be dumping some rain. Another slightly weaker cell lies to the N, and another one is to the NW, but it is further away.
	Winds: light, SE
2000 UTC	High clouds cover majority of sky, just a few holes here and there. There's a cell just to our NW and another one to our NE. In the distance to the north is another cell. The one to the NW is very close to being on top of us and extends off a ways to the NW.
	Winds: very light, variable
2100 UTC	The high clouds have thinned out, especially to the north and overhead. Medium sized cumulus exist to the NE, N, and NW, off in the distance. The cloud that had been close to us on the NW side has dissipated, as has the one on the NE side.
	Winds: very light, variable
2200 UTC	High clouds are just about gone except for some in the SW quadrant. All that is left of the earlier clouds are a few small cumulus, mostly in the northern half of the sky. There are big storms in the tip of Florida right now with dBz's up in the 60's (see RHI's).
	Winds: very light and variable

8/21/01

1400 UTC	The sky is overcast with numerous low cumulus clouds. There is an area of dissipating rain moving towards the N-POL site from the south. To the north and northwest are isolated convective showers.
	Winds: light and variable
1500 UTC	The sky is overcast with a few light sprinkles falling over the area. The area of precipitation to the south appears to have dissipated. There are still convective showers in the northwest quadrant, and they seem to be more organized than the previous hour. Most of the rain is beyond 110 km range and moving away from the radar.
	Winds: light northerly winds
1600 UTC	The sky is still overcast, but the layer of the cirrus clouds appears to be thinning. The convective showers in the northwest quadrant have organized into a fairly

narrow rain band. To the south, cumulus clouds are present, as well as small echo returns on the RTD.

Winds: light and variable

1800 UTC

The isolated convective showers to the south two hours ago have developed into a squall line that is moving northward. The orientation of the line is parallel to the Keys. Heavy rain and thunder were present here at N-POL.

Winds: gusty during the rain showers; light from the ENE when no rain was falling

1900 UTC

The squall line is still present to the north and is moving towards NNW. Ahead of the line are a few isolated echoes. Larger cells are located over the southern portion of the Florida peninsula. To the south, the clouds are beginning to clear as some blue sky is present. TOGA is also collecting data on the squall line.

Winds: light and variable

2000 UTC

The squall line is still present to the north and is oriented parallel to the Keys. Its length is close to 250 km (although the eastern part of the line goes off the radar display). There are a few very intense cells, and RHIs show echo tops near 55,000 ft! The clouds are dark to the north and rain shafts are present. There are also some low-level cumulus clouds trailing in the rear of the line. Southward, the cirrus deck from earlier times is continuing to dissipate and more blue sky is present. There does seem to be more cumulus clouds growing to the southern quadrants.

Winds: light and variable

2100 UTC

The real time display shows that the line of storms has a large stratiform region to its rear. Stronger cells are still present along the leading edge. There also seems to be more development of isolated convection to the east of the radar. To the north is a cirrus deck associated with the line of storms. This area is fairly dark and rain shafts are present in the distance. Also present are low-level cumulus and stratocumulus clouds. To the south, there are patches of blue sky, but there seems to be an increase in the amount of cloud cover. Some of the cumulus appear to be deeper than the previous hour.

Winds: from N-NW near 10 mph

2200 UTC

The line of storms is still propagating to the north and appears to be weakening. The rear portion consists mainly of stratiform-type precipitation. There are a few areas of stronger echoes along the leading edge. To the east of N-POL and behind the line, are isolated convective cells. Outside, the sky is nearly overcast from the cirrus clouds associated with the outflow of the line. There are a few patches of blue sky to the south. Towards the southeast, where the isolated cells are located, cumulus clouds are present.

Winds: light from the N-NW.

8/22/01

0000 UTC

Stratiform rain region to the north and stronger convection south of Keys beginning to dissipate. The strongest cells are located about 100 km south of the Keys. Thin layer of cirrus clouds overhead with some cumulus clouds just north of the Keys. Winds are light and variable.

0100 UTC

Stratiform rain region north of Keys continues to dissipate as it drifts northeastward while stronger convection 100 to 150 km south of Keys holding together as it moves off to the west. Winds are light and variable.

0200 UTC

Convection south of the Keys formed into a broad stratiform rain region which continues to move towards the west. Stratiform rain region north of the Keys completely dissipated now; however, new isolated convective cells forming just north of the dissipated stratiform rain region and is moving south-southeastward. New convection cells southeast of the Keys about 100 to 150 km out moving west. Winds are light and variable. Lightning is visible well off towards the southeast.

0300 UTC	Broad stratiform rain region south of the Keys beginning to dissipate. Isolated convective cells continue to develop and dissipate to the north. Isolated cells forming east of the Keys now. Winds remain light and variable.
0400 UTC	Weak cells to the southeast and north beginning to slowly dissipate. Winds are calm.
0500 UTC	Cells about 50 km towards the southeast moving northwest towards the Keys. Isolated cells north of the Keys drifting southward. Winds are calm.
0600 UTC	Cluster of cells off to the southeast beginning to move over the Keys. Currently raining at N-POL. Rain began at 0600 UTC. No other rain showers around. Winds are from the southeast now since an outflow boundary generated by the cluster of cells moved by.
0700 UTC	Small stratiform rain region just southeast of the Keys left over from cluster of cells. Rain ended at N-POL around 0645 UTC. Winds calm.
0800 UTC	Small stratiform rain region still situated southeast of Keys and is now drifting towards the southeast. Winds remain calm.
0900 UTC	Almost no rain on radar screen. Winds are calm.
1000 UTC	Isolated cells off towards the east-southeast moving southwestward. Winds remain calm.
1100 UTC	There are mostly cloudy skies with different layers of clouds present. There are high cirrus clouds with a lower stratus cloud deck over all quadrants. Lastly, there are low-level cumulus clouds primarily to the south. There are two small cells to the southeast. Winds: calm
1200 UTC	Mostly cloudy skies prevail with different layers and types of clouds present. A high cirrus cloud layer is present mainly to the south. In all quadrants, a layer of stratus-stratocumulus clouds is present. There are low-level cumulus clouds dominant to the south. However, there seems to be isolated growing cumulus to the northwest. The radar shows some isolated showers to the southeast that appear to be weakening. To the northwest are a few isolated convective showers beginning to develop. Winds: calm
1300 UTC	The sky is overcast with an upper level cirrus cloud layer. Beneath this cloud layer are patches of stratocumulus clouds in all quadrants. To the north and east, cumulus clouds are beginning to develop and grow. Northwest of the radar, the sky is dark, as radar indicates precipitation for the area. The radar also shows a region of light precipitation to the southeast associated with dissipating convective showers. Northwest of the radar, isolated convective cells are still present. A convective cell has also just developed to the northeast about 40 km away. Winds: light and variable
1400 UTC	The sky is overcast with an upper level cloud layer. Beneath this cloud layer are many low level stratocumulus and cumulus clouds. Just off to the N-NE is a rain shaft. The clouds in the NE quadrant appear to have more vertical depth than the clouds in the other three quadrants. Radar shows a couple of isolated convective showers to the northeast around 25-30 km away. The precipitation region to the southeast from earlier times appears to be dissipating, but there are a few isolated convective cells that have developed 50 km away. To the northwest, the convective showers close to the radar are weakening. Winds: light and variable

1500 UTC The sky is overcast in the southern two quadrants with low-level stratocumulus clouds. To the north, there are a few patches a blue sky, but there are many cumulus clouds beneath a cirrus layer. Also, a rain shaft is present to the west. N-POL received rain from 1515-1530. The radar shows a region of dissipating Stratiform rain to the southeast. The northwest sector has many small isolated convective showers. To the east is a small region of developing showers about 10-20 km away.
Winds: calm

1600 UTC The skies are mostly cloud with a few patches of blue to the north. The northern two quadrants have growing cumulus clouds. There is a rain shaft to the east and southwest of the radar. Light rain fell for about 10 minutes beginning at 1555. Radar shows a dissipating region of precipitation to the southeast. The northwest quadrant has multiple isolated convective cells. There is also a convective cell to the southwest moving away from the radar.
Winds: light from the E-SE

1700 UTC To the south, the sky is overcast with cirrus clouds, and stratus clouds are present in the lower levels. The northern two quadrants are also overcast, but there are patches of blue sky visible. Along the horizon in the two northern quadrants are cumulus clouds, some of which appear to be growing larger. The radar shows multiple isolated convective cells in the northwest quadrant. These cells vary from 50-150 km in range from the radar.
Winds: calm

1800 UTC Mostly cloudy skies prevail, although the high cirrus cloud layer is beginning to thin out a little and more areas of blue sky are present. All quadrants still have patches of low-to-mid level stratus-type clouds. The northwest quadrant has cumulus clouds, as well as a cumulonimbus cloud. The radar shows this area to consist of precipitation from the merging of the convective showers from earlier times. There are also isolated convective cells over the southern Florida peninsula beginning to develop.
Winds: light from the E-NE

2000 UTC The southern two quadrants are beginning to clear and partly cloudy skies are dominant. There seems to be three distinct layers of clouds to the south. A high level cirrus layer that continues to thin out, a layer of patchy altostratus clouds, and low level small cumulus clouds. The northern quadrants have more clouds. The same layers and types of clouds are present with the addition of deeper looking cumulus clouds to the northeast. Radar shows a dissipating region of precipitation to the west, and convective cells in the southern Florida peninsula.
Winds: light and variable

2100 UTC Partly cloudy skies prevail. Most of the high cirrus clouds are gone and mainly altostratus and altocumulus clouds are present over all quadrants. There is a developing convective cell just 10-15 km ENE of the radar site. A rain shaft is also visible. Radar indicates this new cell in addition to southward moving showers over the southern Florida peninsula. To the west, two dissipating regions of stratiform precipitation are present.
Winds: light from the NE

2200 UTC Conditions are partly cloudy with mainly cumulus clouds. There are deep cumulonimbus clouds associated with convective showers to the east and southwest. Rain shafts are present outside the radar in both of those directions. There is also a rapidly developing cumulus cloud to the northeast of the radar site. Radar shows many small convective showers developing over the keys and moving to the south-southwest.
Winds: light from NE

2300 UTC Partly cloudy with cumulus and cumulus congestus dominating the sky. Raining at N-Pol at the moment with rain showers oriented east to west just south of the Keys. South-southwestern movement of showers. Cirrus clouds off towards the northwest. Winds from the northeast.

8/23/01

0000 UTC	Rain showers continue south and east of the keys. Showers generally moving south-southwest still. Winds are calm.
0100 UTC	Isolated convective showers off to the southeast. Movement is towards the southwest. Some lightning well off towards the south-southeast. Winds are calm.
0200 UTC	Convective cells south of the keys. Movement towards the west-southwest. Winds remain calm.
0300 UTC	Convective cells dominate the southern portion of the radar screen with movement generally towards the west-southwest. Winds remain calm.
0400 UTC	The cells to the south are beginning to dissipate; however, new cells are firing north of the Keys oriented in a north-south direction with movement towards the south-southwest. Winds are calm.
0500 UTC	Cells to the south continue to dissipate. Two distinct but small lines of convective cells have formed to the north. One line oriented northwest to southeast and the other nearly perpendicular to the other oriented northeast to southwest. Both lines have been moving off towards the south-southwest. Winds are light and variable.
0600 UTC	Isolated cells mainly west of the Keys. Movement is more to the west now. Winds remain light and variable.
0700 UTC	Very few convective cells around. Winds are calm.
0800 UTC	Some weak convective cells north of the Keys. Movement is towards the northwest. Winds are light out of the east.
0900 UTC	Isolated, small convective cells continue to form and move off to the northwest north of the keys. Winds are light and variable.
1000 UTC	Isolated cells north and east of the Keys. Movement towards the west. Winds are light and variable.
1100 UTC	One cell way to the east of here, and one way to the north of here. Neither one is very strong. Sky here is mostly clear, with high cirrus to the south and a line of small cumulus oriented SW to NE. Winds: very light, variable
1200 UTC	Nothing on radar. There are a few small cumulus to the north, and some more to the west that are a little larger. High cirrus to the south. Otherwise clear sky. Winds: very light, E
1300 UTC	A couple blips on radar now in the NW quadrant, perhaps they will grow into something by the afternoon. Due west of here, there is a medium sized cumulus cloud that has grown since 1300, and to the north, there are the small cumulus that are always there. Otherwise, sky is clear. Winds: very light, E
1400 UTC	The blips have turned into small cells now, and are mostly confined to the NW quadrant. A couple cells to our north are visible and appear to be growing, and the medium sized cloud to the west is also still apparent. The strongest cell is at 330 deg., 70 km range, and has reflectivities up to ~48 dBz. The cell to the north is at 0 deg, 40 km range, and has reflectivities up to ~42 dBz. Otherwise, sky is clear. Winds: light, E
1500 UTC	The cells in the NW quadrant are still growing, but not rapidly. A line of small sized cumulus extends from W to E overhead, and to the N and NNW there are more medium sized cumulus. The largest cloud visible is directly to the N. Sky mostly clear otherwise. Winds: light, E
1600 UTC	Cells in NW quadrant are getting larger and starting to come closer together. Main activity is concentrated between 290 deg and 350 degrees.

1700 UTC Can see rain on the runway to the north, will probably be here soon. This rain matches up with a weak cell that is currently over the islands. Sky is mostly overcast overhead and to the north, but still clear further to the south. Most of the activity is still in the NW quadrant, although it does not seem to be strengthening like before. There are a few small weak cells popping up now in the SE quadrant also.
Winds: very light, NNW

1800 UTC Showers that came here during the last hour have moved off toward the SE – it's very dark off toward this direction. There are high cirrus clouds directly overhead. To the N, the sky is clearer, especially to the NE. There is a lot of rain areas in the NW quadrant, with one cell that is of decent size. Off in the distance to the NW it is rather dark – perhaps it is raining there.
Winds: light and variable

1900 UTC Largest clouds now to the south. Clear overhead. High smooth clouds just a little to the north, clear further to the north past the high clouds. Small cumulus are all around on the horizon. Otherwise, clear skies. Very warm and humid.
Winds: very light, SE

2000 UTC Line of small cumulus overhead. Clear to the north and south of this line. More medium and small cumulus in the distance to the south. Warm and humid. Most of the activity on radar has died down now, but there is still one weak area of reflectivities to the west, a stronger one to the southwest out past 100 km range, and a third area of convection over the southern tip of Florida. These cells are not very large.
Winds: very light, SE

2100 UTC High clouds to the south. Otherwise, fairly clear with the exception one cumulus cloud cell to the NW that seems to be growing. Less humid now..
Winds: light, SE

2200 UTC Large cell to the NE has gained height since 2100. This may be the cell on the radar to the NE off the Florida coast. This is the main area of interest right now. High clouds to the S. Rest of sky clear. Radar was blasted a couple times during this past hour, resulting in beams of interference.
Winds: a little stronger, SE

2225 UTC Cell to the NE was the one from Florida, it is moving toward the Keys and has reflectivities up to 50 dBZ. Looks nice from here.

8/24/01

0000 UTC Cell just skirting by the radar to the North and Northwest with maximum reflectivity near 45 dBZ. Strong outflow boundary with gusts near 30 mph whistled through the NPOL antenna. Wall cloud present to NW. Showers surrounding the radar to the East and North.

0045 UTC Cluster of convection to NE near 100 km range with maximum reflectivity near 50 dBZ (at 1.4° elevation). Impressive lightning illuminating mature Cb structure. Cell near radar (mentioned in 0000 UTC ob.) is dissipating.

0142 UTC Strong cells to N and NE from 80-150 km range. Maximum reflectivity from 45-50 dBZ. Cells are dropping to the SSW toward the lower Keys.

0217 UTC Strong cells to North continue to maintain intensity and coverage. Persistent lightning revealing tremendous Cb structure. Cells are oriented E-W and dropping to the S and SW. The closest cells are approx. 70km North of NPOL. X-sections reveal ~35 dBZ extending to height of 11 km. Maximum reflectivity near 50 dBZ.

0310 UTC Cells to North have been gradually diminishing in coverage and intensity and

are becoming more disorganized with time. Maximum reflectivity near 48.5 dBZ, while height of ~35 dBZ echo extending to height of 3 km. Range of echo extends from 65-135 km. All significant echo located to North. Lightning display has ended.

0410 UTC	Scattered cells to North range from 43 to 135 km distance. Maximum reflectivity approx 45.5 dBZ. Cells moving to S/SW. Echo tops near 8 km altitude. Reflectivity cores extending from 3.5 km to 5.75 km in height.
0520 UTC	Scattered cells to North – nothing organized. Cells dissipate and re-form approx 40-130 km North. Maximum reflectivity remains about 45.5 dBZ. Cells are moving to S/SW, but dissipate when approaching Keys.
0551 UTC	Isolated small cells have developed to the South. Activity previously mentioned to North is dissipating.
0628 UTC	A few scattered cells mainly to the West. A larger cell is located to the NW near 150 km range.
0710 UTC	A few scattered cells to the W and NW. Otherwise, very quiet.
0747 UTC	A few widely scattered (diminishing) cells to the West.
0836 UTC	A few showers and isolated cells to West beyond 150 km range.
0951 UTC	No significant echo. Intermittent burst pulse problems have persisted for the past couple hours.
1026 UTC	No significant echo. Burst pulse problems continue.
1100 UTC	High clouds to the S and E. Normal small clouds all around. Otherwise clear. Winds: calm
1200 UTC	Radar not transmitting right now. Same conditions as before. Winds: calm
1300 UTC	Cluster of clouds a little south of here has grown to medium size, as has another cluster to the west. High clouds to the south. Otherwise clear. Two tiny cells on radar to the NNE, and one new tiny cell to the ESE. Winds: calm
1400 UTC	High clouds to the south, small cumulus clouds all around. Otherwise clear. Three small cells north of here, the closest one is about 60 km away. During the past hour they have had reflectivity values up to ~45 dBz, but not constantly. Winds: very light, E
1500 UTC	Same conditions outside. Three small cells at about a 70-90 km range to the north on radar (between 330 and 360 deg.). Winds: very light, E
1600 UTC	Same conditions outside. There is one small cell to the NNW on radar, but it is weakening. Winds: very light, E
1730 UTC	Line of clouds overhead that look like they may have some rain in them. The length of the line runs from E to W, and is not very wide. High clouds persist to the south, and to the north the sky is clearer. There are a few blips on the radar to the west, but that's it. Winds: light, SE
1738 UTC	It is raining lightly.
1800 UTC	It is still sprinkling a little. The rain came from a cell that moved down the Keys from east to west. This cell was hard to pick out on radar because it blended in with the clutter, but it had reflectivity values up to 45 dBz. There is more rain

visible to the east of here. This rain also shows up on radar. Sky is clearer to the south and west, and blue to the north.

Winds: ENE

1900 UTC

Rain has stopped. Cell that caused the rain here has moved off to the west and appear to be raining over Key West. From outside, the cell looks very tall and has some crisp looking tops – perhaps it will gain more depth. High clouds still cover the southern sky and medium level clouds lie overhead and to the east. To the north, skies are clearer, with a few small cumulus that tilt SE with height.

Winds: SE

2000 UTC

Can still see the cell that came through here earlier way off in the distance to the west. Another medium sized cumulus is building to the east, and high clouds are directly overhead. Clear to the north with the exception of a few small cumulus clouds.

Winds: light and variable

2100 UTC

Can see the remains of that cell from earlier way off in the distance to the west. High clouds still to the south, clear off to the north

Winds: calm

2200 UTC

High clouds cover a little more than half of the sky. Mostly clear to the north. Nothing on radar within a 100 km. A few weakening cells on tip of Florida.

Winds: very light, E

2350 UTC

Two isolated cells to NE. One strong cell in southern FL near 150 km range. The other just off the southern tip of FL near 100 km range. Cb present to NE and far West. High clouds overhead with scattered Cu to North.

8/25/01

0120 UTC

A few isolated cells over south FL between 100-150 km range. No significant echo within 100 km.

0236 UTC

A few isolated cells over south FL between 100-150 km range. No significant echo within 100 km.

0310 UTC

Cell with two cores developed to NE near 30 km range. Maximum reflectivity 48 dBZ extending from surface to 3.0 km height. Detectable echo reaches to 12 km height. Cell is stationary. Cells which were previously over south FL have now moved to the West and are between 80 and 125 km NE of NPOL. Maximum reflectivity in these distant cells is approx 50 dBZ.

0340 UTC

Cell to NE near 30 km range is now weakening. Maximum reflectivity near 30 dBZ. No movement detected. Cells near south FL maintaining strength with no movement detected.

0450 UTC

Cell to NW near 50 km range. Maximum reflectivity near 45 dBZ. No movement detected. Impressive lightning (in-cloud and cloud-to-cloud) visible to North. Cluster of 5 convective cells located just to the West of the southern tip of FL. Cells are oriented N-S. Isolated cells are located near Key Largo beyond 100 km range.

0511 UTC

Low elevation stop at -3.2° . Scans would not run as scheduled. Per IRIS, volume scan was running, but antenna was not moving. Stopped scheduled scans. Manually brought elevation up with antenna mode in local control and restarted RCP02. Switched antenna mode back to remote. Manually started surveillance scan. Operations appear normal.

0524 UTC

Missing burst pulse message. Display appears OK. No further messages.

0545 UTC	Cluster of cells to North from 50 to 100 km range. Maximum reflectivities near 50 dBZ in a few pixels. No movement detected, however convective elements dissipate and redevelop. Continuous lightning display to North.
0615 UTC	Missing burst pulse – bad scan. Transmitter restarted – system appears okay.
0620 UTC	Small cells have recently developed to W and NW from 30-50 km range. Cluster of cells to North are diminishing.
0650 UTC	Volume scan stopped prematurely during 29.1° sweep. Mike restarted RCP02 after manually bringing antenna down. Isolated cells to W and NW – nothing organized. Lightning has stopped.
0715 UTC	Lost burst pulse. Problem appears to happen only during surveillance scans.
0740 UTC	Isolated small cells to W and NW from 40-150 km range.
0740 UTC	Lost burst pulse – shutdown IRIS – difficulty restarting IRIS – rebooting system
0901 UTC	System up Scattered small cells have developed to N and NW from ranges 40-100 km.
1001 UTC	A few showers and small convective cells are present to the NE and NW from 35-125 km range. Maximum reflectivity ~ 45 dBZ.